

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

AFFYMETRIX, INC.,

Plaintiff,

v.

ILLUMINA, INC.,

Defendant.

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C.A. No. 04-901-JJF

FINAL JURY INSTRUCTIONS

March 12, 2007

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1. GENERAL INSTRUCTIONS

1.1 INTRODUCTION

Members of the jury, now it is time for me to instruct you about the law that you must follow in deciding this case.

I will start by explaining your duties and the general rules that apply in every civil case.

Then I will explain some rules that you must use in evaluating particular testimony and evidence.

Then I will explain the positions of the parties and the law you will apply in this case.

And last, I will explain the rules that you must follow during your deliberations in the jury room and the possible verdicts that you may return.

Please listen very carefully to everything I say.

You will also have a verdict form, which will list the questions that you must decide in this case.

1.2 JURORS' DUTIES

You have two main duties as jurors. The first one is to decide what the facts are from the evidence that you saw and heard here in court. Deciding what the facts are is your job, not mine, and nothing I have said or done during this trial was meant to influence your decision about the facts in any way.

Your second duty is to take the law that I give you, apply it to the facts and decide under the appropriate burden of proof, which party should prevail on any given issue. It is my job to instruct you about the law, and you are bound by the oath that you took at the beginning of the trial to follow the instructions that I give you, even if you personally disagree with them. This includes the instructions that I gave you before and during the trial, and these instructions. All of the instructions are important, and you should consider them together as a whole.

Perform these duties fairly. Do not let any bias, sympathy or prejudice that you may feel toward one side or the other influence your decision in any way.

1.3 BURDEN OF PROOF

This is a civil case in which Affymetrix, Inc. is alleging that Illumina, Inc. is infringing Affymetrix's patents, and in which Illumina is asserting that it does not infringe. Affymetrix has the burden of proving patent infringement and its claim of damages by what is called a preponderance of the evidence. That means Affymetrix has to produce evidence which, when considered in light of all of the facts, leads you to believe that what Affymetrix claims is more likely true than not. To put it differently, if you were to put Affymetrix's evidence and Illumina's evidence on the opposite sides of a scale, the evidence supporting Affymetrix's claims would have to make the scales tip somewhat on Affymetrix's side for your verdict to be for Affymetrix. If Affymetrix fails to meet its burden for a particular claim, your verdict must be for Illumina on that claim. Those of you who are familiar with criminal cases will have heard the term "proof beyond a reasonable doubt." That burden does not apply in a civil case and does not play any part in this case. Therefore, you should not consider it at all in your deliberations.

1.4 EVIDENCE DEFINED

You must make your decision based only on the evidence that you saw and heard here in court. Do not let rumors, suspicions, or anything else that you may have seen or heard outside of court influence your decision in any way.

The evidence in this case includes only what the witnesses said while they were testifying under oath (including deposition testimony that has been played or read to you), the exhibits that I allowed into evidence, the stipulations that the lawyers agreed to, and the facts that I have judicially noticed.

Nothing else is evidence. The lawyers' statements and arguments are not evidence. Their questions and objections are not evidence. My legal rules are not evidence. Any of my comments or questions are not evidence.

During the trial I may have not let you hear the answers to some of the questions that the lawyers asked. I also may have ruled that you could not see some of the exhibits that the lawyers wanted you to see. And, sometimes I may have ordered you to disregard things that you saw or heard, or I struck things from the record. You must completely ignore all of these things. Do not even think about them. Do not speculate about what a witness might have said or what an exhibit might have shown. These things are not in evidence, and you are bound by your oath not to let them influence your decision in any way.

Make your decision based only on the evidence, as I have defined it here, and nothing else.

1.5 CONSIDERATION OF EVIDENCE

You should use your common sense in weighing the evidence. Consider it in light of your everyday experience with people and events, and give it whatever weight you believe it deserves. If your experience tells you that certain evidence reasonably leads to a conclusion, you are free to reach that conclusion.

1.5.1 USE OF NOTES

You may use notes taken during trial to assist your memory. However, you should use caution in consulting your notes. There is always a tendency to attach undue importance to matters that you have written down. Some testimony that is considered unimportant at the time presented, and thus not written down, takes on greater importance later on in the trial in light of all the evidence presented. Therefore, you are instructed that your notes are only a tool to aid your own individual memory and you should not compare notes with other jurors in determining the content of any testimony or in evaluating the importance of any evidence. Your notes are not evidence, and are by no means a complete outline of the proceedings or a list of the highlights of the trial. Above all, your memory should be the greatest asset when it comes time to deliberate and render a decision in this case.

1.6 DIRECT AND CIRCUMSTANTIAL EVIDENCE

Now, some of you may have heard the terms “direct evidence” and “circumstantial evidence.”

Direct evidence is simply evidence like the testimony of an eyewitness which, if you believe it, directly proves a fact. If a witness testified that he saw it raining outside, and you believed him, that would be direct evidence that it was raining.

Circumstantial evidence is simply a chain of circumstances that indirectly proves a fact. If someone walked into the courtroom wearing a raincoat covered with drops of water and carrying a wet umbrella, that would be circumstantial evidence from which you could conclude that it was raining.

It is your job to decide how much weight to give the direct and circumstantial evidence. The law makes no distinction between the weight that you should give to either one, nor does it say that one is any better evidence than the other. You should consider all the evidence, both direct and circumstantial, and give it whatever weight you believe it deserves.

1.7 CREDIBILITY OF WITNESSES

In determining the weight to give to the testimony of a witness, you should ask yourself whether there was evidence tending to prove that the witness testified falsely about some important fact, or whether there was evidence that at some other time the witness said or did something or failed to say or do something that was different from the testimony he gave at the trial.

You should remember that a simple mistake by a witness does not necessarily mean that the witness was not telling the truth. People may tend to forget some things or remember other things inaccurately. If a witness has made a misstatement, you must consider whether it was simply an innocent lapse of memory or an intentional falsehood, and that may depend upon whether it concerns an important fact or an unimportant detail.

1.8 NUMBER OF WITNESSES

One more point about the witnesses. Sometimes jurors wonder if the number of witnesses who testified makes any difference.

Do not make any decisions based only on the number of witnesses who testified. What is more important is how believable the witnesses were, and how much weight you think their testimony deserves. Concentrate on that, not the numbers.

1.9 EXPERT WITNESSES

When scientific, technical or other specialized knowledge may be helpful to a jury, a person who has special knowledge, skill, education, training, or experience in that technical field, called an expert witness, is permitted to state an opinion on those matters.

The value of this kind of testimony depends upon the qualifications and skill of the witness, the source of the witness's information, and the reasons supplied for any opinions given. You should consider this kind of testimony like all other testimony you hear and weigh it by the same tests. However, as with any other witness, you are not required to accept any expert's opinions. It will be up to you to decide whether to rely upon them.

1.10 DEPOSITION TESTIMONY

During the trial, certain testimony was presented to you by the reading of a deposition transcript or the playing of video tape excerpts from a deposition. This testimony is entitled to the same consideration you would give it had the witnesses personally appeared in court.

1.11 DEMONSTRATIVE EXHIBITS

During the course of this trial, you have seen many exhibits. Many of these exhibits were admitted as evidence. You will have these admitted exhibits in the jury room for your deliberations. The remainder of the exhibits (including charts and animations) were offered to help illustrate the testimony of the various witnesses. These illustrative exhibits, called "demonstrative exhibits," have not been admitted, are not evidence, and should not be considered as evidence. Rather, it is the underlying testimony of the witness that you heard when you saw the demonstrative exhibits that is the evidence in this case.

2. THE PARTIES AND THEIR CONTENTIONS

2.1 THE PARTIES

The Plaintiff in this case is Affymetrix, Inc. The Defendant is Illumina, Inc. I will refer to the Plaintiff as "Affymetrix". I will refer to the Defendant as "Illumina".

2.2 AFFYMETRIX'S CONTENTIONS

Affymetrix contends that Illumina has directly infringed and continues to directly infringe various claims of Affymetrix's five patents. Affymetrix also contends that Illumina has indirectly infringed its patents. I will explain the elements of both direct and indirect infringement shortly. Specifically, Affymetrix charges that Illumina has infringed, and continues to infringe:

- claims 1 and 2 of the '531 patent;
- claims 1, 5, and 9 of the '716 patent;
- claims 2 and 9 of the '432 patent;
- claims 36 and 41 of the '365 patent; and,
- claims 14, 15 and 35 of the '243 patent.

I will refer to these five patents collectively as the patents-in-suit, or individually by the last three numbers of the patents.

Affymetrix also contends that it is entitled to damages for Illumina's infringement in the form of lost profits on some Illumina sales and a reasonable royalty on other Illumina sales.

2.3 ILLUMINA'S CONTENTIONS

Illumina contends that its products do not infringe literally or under the doctrine of equivalents any of the asserted claims of the patents-in-suit.

If Illumina is found to infringe, Illumina contends that Affymetrix is only entitled to a reasonable royalty on those accused products that Affymetrix has proven Illumina made, used, sold or offered for sale within the United States.

2.4 SUMMARY OF ISSUES

In this case, you must decide the issues according to the instructions I give you. In general these issues are:

1. Whether Affymetrix has proven by a preponderance of the evidence that Illumina has infringed any of the asserted claims of the patents-in-suit.
2. If you find that any of the asserted claims of the patents-in-suit are infringed, the amount of damages that Affymetrix has proven by a preponderance of the evidence is due to it

3. THE PATENT CLAIMS

3.1 PATENT CLAIMS GENERALLY

Deciding whether a claim has been directly infringed is a two-step process. First, the meaning of the patent claim is determined as a matter of law. That job is for the Court, and I will tell you shortly what the key terms of the asserted claims mean as a matter of law. In the second step, you must compare each claim as I have interpreted it to each of the accused products to determine whether every element of the claim can be found in that accused product. This element-by-element comparison is your responsibility as the jury for this case.

Before you can decide whether or not Illumina has infringed any of Affymetrix's patents, you will have to understand the patent "claims." Patent claims are the numbered paragraphs at the end of a patent. The patent claims involved here are:

- claims 1 and 2 of the '531 patent,
- claims 1, 5, and 9 of the '716 patent,
- claims 2 and 9 of the '432 patent,
- claims 36 and 41 of the '365 patent, and,
- claims 14, 15 and 35 of the '243 patent.

The claims are "word pictures" intended to define, in words, the boundaries of the invention described and illustrated in the patent. Only the claims of the patent can be infringed. Neither the specification, which is the written description of the invention, nor the drawings of the patent can be infringed.

Claims may be directed to products or they may be directed to methods for making or using a product.

Claims are typically divided into parts called “elements.” For example, a claim that covers the invention of a table may recite the tabletop, four legs and the glue that secures the legs to the table top. The table top, legs and glue are each a separate element of the claim.

When making your decision regarding infringement, you should not compare Illumina’s products with any specific example set out in the patents-in-suit, or with any product manufactured by Affymetrix. Rather, you must only compare Illumina’s products with the asserted claims of the patents-in-suit.

Each of the claims must be considered individually, and to show infringement of a given patent by a given product, Affymetrix need only establish that one claim of that patent has been infringed by that product.

3.2 INDEPENDENT AND DEPENDENT CLAIMS

There are two different types of claims in a patent. The first type is called an independent claim. An independent claim does not refer to any other claim of the patent. An independent claim is read separately to determine its scope.

On the other hand, a dependent claim refers to and depends upon at least one other claim in the patent and thus incorporates whatever that other claim says. Accordingly, to determine what a dependent claim covers, you must read both the dependent claim and the claim or claims to which it refers.

For example, claim 14 of the '243 patent is an independent claim. You know this because it mentions no other claims. Accordingly, the words of this claim are read by themselves in order to determine what the claim covers.

On the other hand, claim 15 of the '243 patent is a dependent claim. It refers to independent claim 14. For an Illumina product to infringe dependent claim 15 of the '243 patent, the Illumina product must have all the elements of both claim 14 and claim 15. Therefore, if you find that an independent claim is not infringed, you must also find that all claims depending on that claim are not infringed.

Some claims of the patents-in-suit are broader than other claims. You are not to read limitations or words of a narrower or dependent claim into a broader or independent claim if the broader claim does not explicitly contain the same limitations.

3.3 OPEN ENDED OR “COMPRISING” CLAIMS

The claims of the patents-in-suit use the transitional term “comprising” or “comprises.” “Comprising” and “comprises” are interpreted the same as “including” or “containing.” In patent claims, “comprising” or “comprises,” mean that the claims are open ended.

For example, a claim to a table comprising a tabletop, four legs and the glue, would be infringed by a table that includes those elements, even if the table also includes additional elements such as wheels on the table’s legs.

3.4 CONSTRUCTION OF CLAIMS

It is the Court's duty under the law to define what patent claims mean. I have made my determinations and I will now instruct you on the meaning of the claims.

You must apply the meaning that I give in each patent claim to decide if the claim is infringed. You must ignore any different interpretations given to these terms by the witnesses or the attorneys. If I have not provided a specific definition for a given term or phrase, you are to use the ordinary English language meaning of that term.

It may be helpful to refer to the copy of the patents-in-suit that you have been given as I discuss the claims at issue here. The claims of the patents are toward the end of each patent.

You are advised that the following definitions for the following terms must be applied in the following patents-in-suit:

'243 Patent

The term "**substrate**," as used in the claims of U.S. Patent No. 6,646,243, means "a material having a rigid or semi-rigid surface."

The term "**target nucleic acids**," as used in the claims of U.S. Patent No. 6,646,243, means "nucleic acids that are deliberately exposed to the nucleic acids attached to the substrate."

¶365 Patent

The phrase “**biological polymers immobilized on a surface**,” as used in the claims of U.S. Patent No. 6,399,365, means “two or more surface-immobilized biological polymers that are recognized by a particular target.”

The term “**housing**,” as used in the claims of U.S. Patent No. 6,399,365, means “a structure that covers, protects, and supports the probe array.”

‘432 Patent

The phrase “**said beads being coded with an encoding system**,” as used in the claims of U.S. Patent No. 6,355,432, means “said beads having a property associated with each bead (separate from the binding polymer) that can be used to distinguish one bead from another.”

The term “**target specific sequence**,” as used in the claims of U.S. Patent No. 6,355,432, means “a known polymer sequence that has affinity for another sequence.”

¶531 Patent

The term “**probe array**,” as used in the claims of U.S. Patent No. 5,545,531, means “a collection of probes, at least two of which are different, arranged in a spacially defined and physically addressable manner.”

The phrase “**arranged in a spacially defined and physically addressable manner**,” as used in the claims of U.S. Patent No. 5,545,531, means “located in a particular location and capable of being addressed.”

'716 Patent

The term "**probe**," as used in the claims of U.S. Patent No. 5,795,716, means "a nucleic acid of known sequence that is capable of hybridizing to its complementary sequence."

The term "**probe intensity**," as used in the claims of U.S. Patent No. 5,795,716, means "intensity from a labeled sample nucleic acid hybridized to a probe location."

The phrase "**indicating an extent of hybridization**," as used in the claims of U.S. Patent No. 5,795,716, means "indicating the relative strength of binding."

The phrase "**comparison of said plurality of probe intensities to each other**," as used in the claims of U.S. Patent No. 5,795,716, means "an examination of the probe intensities of two or more probes in relation to each other."

The phrase "**generates a base call identifying said unknown base**," as used in the claims of U.S. Patent No. 5,795,716, means "determines which nucleotide is most likely to be present at a particular position in a nucleic acid sequence."

4. PATENT INFRINGEMENT

4.1 PATENT INFRINGEMENT GENERALLY

A patent owner may enforce its right to stop others from making, using, selling, or offering to sell the patented invention in the United States by filing a lawsuit for patent infringement. Here, Affymetrix, the patent owner, has sued Illumina, the accused infringer, and has alleged that Illumina's products and services infringe one or more claims of Affymetrix's patents-in-suit.

Patent law provides that any person or business entity which makes, uses, sells or offers to sell, without the patent owner's permission, any product, apparatus or method legally protected by at least one claim of a patent within the United States before the patent expires, infringes the patent.

There are several ways to infringe a patent. One may directly infringe a patent, either literally or under the doctrine of equivalents. Alternatively, one may indirectly infringe a patent, by knowingly inducing others to infringe a patent, in which case both the inducer and the direct infringer are liable for infringement.

4.2 DIRECT INFRINGEMENT – KNOWLEDGE OF PATENT OR INTENT TO INFRINGE IS IMMATERIAL

Illumina would be liable for directly infringing Affymetrix's patents if you find that Affymetrix has proven by a preponderance of the evidence that Illumina has made, used or sold the invention defined in at least one claim of Affymetrix's patent. Illumina may directly infringe a patent without knowledge that what it is doing is an infringement of the patent. Illumina may also infringe even though in good faith it believes that what it is doing is not an infringement of any patent.

4.3 LITERAL INFRINGEMENT

There are two ways in which a patent claim may be directly infringed. First, a claim may be literally infringed. Second, a claim may be infringed under what is called the “doctrine of equivalents,” which I will address shortly.

For one of Illumina’s products to literally infringe any one of Affymetrix’s patent claims, the subject matter of that patent claim must be found in Illumina’s product or the use of its product. In other words, one of Affymetrix’s patent claims is literally infringed if one of Illumina’s products or the use of its products includes each and every element in that claim. If Illumina’s products or the use of its products omits any single component recited in a claim of Affymetrix’s patents, Illumina does not literally infringe that claim. You must determine literal infringement with respect to each patent claim individually.

4.4 DOCTRINE OF EQUIVALENTS

If you do not find literal infringement, you may consider infringement under the doctrine of equivalents. I have referred to the “doctrine of equivalents” before. Now it is time to explain this term.

As I have noted, to infringe a patent, every claim element must be present in the accused product. A claim element may be present in an accused product in one of two ways, either literally or under the doctrine of equivalents. A claim element is literally present if it exists in the accused product just as it is described in the claim, either as I have explained that language to you or, if I did not explain it, as you understand it from the evidence presented during trial.

A claim element is present in an accused product under the doctrine of equivalents if the differences between the claim element and a corresponding aspect of the accused product are insubstantial. One way to determine this is to look at whether or not the accused structure performs substantially the same function, in substantially the same way, to achieve substantially the same result as the element in the claimed invention.

Application of the doctrine of equivalents is on an element-by-element basis, meaning that for Illumina’s products or use of its products to infringe any one of Affymetrix’s asserted claims under the doctrine of equivalents, the element of a patent claim which is not literally present in the accused product must be present by equivalence. Therefore, the question is whether the accused product contains an equivalent for each element of the claim that is not literally present in the accused product. The question is not whether the accused product or method as a whole is equivalent to the claimed invention as a whole.

It is not a requirement under doctrine of equivalents infringement that those of ordinary skill in the art knew of the equivalent when the patent application was filed or when the patent issued. The question of whether Illumina's products or services are equivalent to what is defined in Affymetrix's claims is to be determined as of the time of the alleged infringement.

4.5 INDIRECT INFRINGEMENT - GENERALLY

In addition to stopping infringement by those who are directly infringing, a patent owner also has the right to stop those who are known as “indirect infringers.” There are those who encourage or induce others to infringe a patent; this is known as “inducing infringement.” I will explain to you in a moment the precise requirements for finding someone has induced infringement by another person.

In this case, Affymetrix accuses Illumina of inducing to the infringement of the patents-in-suit. It is your job to determine whether Affymetrix has proven inducement by a preponderance of the evidence. Keep in mind that there can be no indirect infringement unless someone is directly infringing the patent. Thus, to prove that Illumina is inducing another person to infringe, Affymetrix must prove by a preponderance of the evidence that Illumina or another person is directly infringing a claim of the patents. Such proof may be based on circumstantial evidence you have heard in this case, rather than direct evidence of infringement.

4.6 INDUCING PATENT INFRINGEMENT

Inducement to infringe requires someone purposefully urging or encouraging another to infringe a patent — inducement to infringe cannot occur unintentionally. This is different from direct infringement, which, as I have told you, can occur without any intent to infringe. To be liable for inducement to infringe, the accused inducer must have known of the patent and actively encouraged or instructed another person how to use a product in a manner that it knew to be infringing and that you, the jury does find infringed the asserted patent claims. Merely having knowledge of the underlying acts of direct infringement by itself is not enough to prove active inducement but rather Affymetrix must prove that Illumina possessed an intent to encourage another to act knowing that such action would infringe the patent.

Thus, to prove that Illumina induced infringement of a patent-in-suit, Affymetrix must prove by a preponderance of the evidence the following three things:

1. Illumina intentionally encouraged or instructed another person how to use a product in a way that Illumina knew to be infringing and that you, the jury, find infringes the patent claims;
2. Illumina knew of the patent-in-suit;
3. The other person infringed an asserted claim of the patent-in-suit.

All three of these things must be proven by either direct or circumstantial evidence before you may find that Illumina induced patent infringement.

5. DAMAGES

5.1 COMPENSATORY DAMAGES IN GENERAL

If, after considering all of the evidence and the law as I have stated it, you have determined that all of the asserted claims are not infringed, your verdict should be for Illumina and you need go no further in your deliberations. On the other hand, if you decide that Illumina has infringed one or more of the patent claims, you must then turn to the issue of damages.

The patent laws provide that in the case of infringement of a patent claim, the owner of the patent shall be awarded damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer. Damages are compensation for all losses suffered as a result of the infringement.

The only relevant issue to the question of damages is the amount necessary to adequately compensate Affymetrix for infringement by Illumina.

5.2 BURDEN OF PROOF - REASONABLE CERTAINTY

Affymetrix has the burden of proving damages by a preponderance of the evidence and is entitled to all damages that can be proven with reasonable certainty. On the one hand, reasonable certainty does not require proof of damages with mathematical precision. Mere difficulty in ascertaining damages is not fatal to Affymetrix. On the other hand, Affymetrix is not entitled to speculative damages; that is, you should not award any amount of loss that, although possible, is wholly remote or the result of mere conjecture. You may base your evaluation of reasonable certainty on opinion evidence.

5.3 DATE DAMAGES MAY BEGIN - MARKING

The date that Affymetrix first gave notice to Illumina of its claim of patent infringement is the date at which patent damages begin to be calculated. That date is in dispute here, and it is up to you to determine what that date is. Affymetrix has the burden to prove by a preponderance of the evidence the date it gave notice.

Affymetrix can give notice in two ways. The first way is to give notice to the public in general. Affymetrix can do this by placing the word "patent" or the abbreviation "PAT" with the number of the patent on substantially all the products it sold that included the patented invention. This type of notice is effective from the date Affymetrix and its licensees began to mark substantially all of their products that use the patented invention with the patent number. If Affymetrix and its licensees did not mark substantially all of their products that use the patented invention with the patent number, then Affymetrix did not provide notice in this way.

A second way Affymetrix can provide notice of its patents is to communicate to Illumina a specific charge that the allegedly infringing product infringed a specific patent. This type of notice is effective from the time it is given. If you find that Affymetrix, before filing this lawsuit, did not properly mark its products and did not notify Illumina by communicating a specific charge that the allegedly infringing products infringed, then Affymetrix can only recover damages for infringement that occurred after it sued Illumina on July 26, 2004.

5.4 METHODS FOR COMPUTING DAMAGES

There are two common methods for computing damages in a patent infringement case. One is called “lost profits,” and the other is called “reasonable royalty.” These are alternative methods for computing damages; you must award either lost profits or a reasonable royalty for each infringing sale made by the accused infringer. You cannot, however, award both lost profits and a reasonable royalty for the same sale.

In this case, Affymetrix is seeking lost profits in connection with some of Illumina’s sales. In connection with the remaining sales accused of infringement, Affymetrix is seeking only a reasonable royalty. For those remaining sales, you will only need to determine the damages based on a reasonable royalty. For the sales on which Affymetrix seeks lost profits, however, you must first determine if Affymetrix has proven its entitlement to lost profits for the sales on which it claims entitlement to lost profits.

Lost profit damages are the profits Affymetrix lost because of the infringement. They are not profits that Illumina actually made. Affymetrix must show that “but for” Illumina’s infringement, Affymetrix would have made the sales or profits it claims were lost.

5.5 LOST PROFITS - LOST SALES

Affymetrix is claiming that it lost sales because of Illumina's infringement. In order to recover lost profits damages for lost sales, Affymetrix must show that "but for" Illumina's infringement, Affymetrix would have made the sales or profits that it claims were lost. One way Affymetrix can prove this is to show:

- (1) there was a demand for the patented product;
- (2) Affymetrix had the ability to meet the market demand;
- (3) no acceptable non-infringing substitutes were available; and
- (4) the amount of the profit it would have made.

If proposed competitive substitutes were available for some sales, Affymetrix can prove lost profits for those sales by showing (1) demand for the patented product; (2) that Affymetrix had the ability to meet the market demand for those sales; (3) proof of its market share; and (4) the amount of the profit it would have made.

Affymetrix need not negate every possibility that purchasers of Illumina's products might have bought another product. To be an acceptable non-infringing substitute, a proposed competitive substitute must have been acceptable to the actual purchasers of the infringing products.

In proving its damages, Affymetrix's burden of proof is not an absolute one, but rather a burden of reasonable probability. If it is reasonably probable that Affymetrix would have made some of the infringing sales, and it is reasonably probable what amount Affymetrix would have profited from the denied sales, then Illumina is liable for the lost profits on those infringing sales. The infringer is not liable, however, for speculative profits.

5.6 REASONABLE ROYALTY

If you find that Affymetrix is not entitled to lost profits on some infringing sales, then Affymetrix is entitled to a reasonable royalty on those sales. A reasonable royalty is the minimum permissible measure of damages set by the patent laws and is not necessarily the actual measure of damages. Rather, it is the floor below which damages should not fall. Accordingly, you may find damages in excess of a reasonable royalty if you find that the facts so warrant.

A reasonable royalty in this case is the amount of money that would be agreed to in a hypothetical arm's-length negotiation between Affymetrix and Illumina, with both operating under the assumption that the negotiated patents are valid and are being infringed by Illumina's products or methods of using its products.

The reasonable royalty must be calculated as of the point in time just prior to when infringement began.

In the hypothetical arm's-length negotiation, you must assume that the person negotiating on behalf of Illumina, and who was willing to take a license, would have known that Affymetrix's patents were valid and infringed by Illumina. You should also assume that both Affymetrix and Illumina knew all pertinent information at the time of the hypothetical negotiations.

5.7 FACTORS FOR DETERMINING REASONABLE ROYALTY

In determining such a reasonable royalty, some of the factors that may be considered are:

1. the royalties received by Affymetrix for licensing others under the patents-in-suit;
2. the rates paid by Affymetrix, Illumina, or others for the use of other patents comparable to the patent in suit;
3. the nature and scope of the license, as exclusive or nonexclusive; or as restricted or nonrestricted in terms of territory or with respect to whom the manufactured product may be sold;
4. Affymetrix's established policy and marketing program to maintain its patent exclusivity by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that exclusivity;
5. the commercial relationship between Affymetrix and Illumina, such as, whether they are competitors in the same territory in the same line of business, or whether they are inventors or promoters;
6. the effect of selling the patented specialty in promoting sales of other products of the licensee, the existing value of the invention to the licensor as a generator or sales of his non-patented items, and the extent of such derivative or convoyed sales;
7. the duration of the patents and the terms of the licenses;
8. the established profitability of the products made under the patents, their commercial success, and their current popularity;
9. the utility and advantages of Affymetrix's patented inventions over the old modes or devices, if any, that had been used for working out similar results;
10. the nature of the patented invention, the character of the commercial

embodiments of it as owned and produced by Affymetrix, and the benefits to those who have used the invention;

11. the extent to which Illumina has made use of the invention, and any evidence that shows the value of that use;

12. the portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions;

13. the portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by Illumina;

14. the opinion testimony of qualified experts; and

15. any other economic factor that a normally prudent businessman would, under similar circumstances, take into consideration in negotiating the hypothetical license.

5.8 INTEREST

Neither of the parties' calculations include interest. Therefore, in arriving at your damages calculation, you should not consider interest in any way because it is the function of the Court to award or deny interest.

5.9 CLOSING STATEMENT — DAMAGES

In determining the issue of a damages award, the Court instructs you that the law does not permit an award of a greater sum than the monetary loss which Affymetrix has suffered as a result of the alleged infringement. If you find Affymetrix is entitled to damages, you may not include and/or add to the award any sum for purposes of punishing Illumina or to set an example.

5.10 CURATIVE INSTRUCTION

The fact that I have instructed you regarding damages should not be construed as suggesting which party is to prevail in this case. Instructions regarding damages are given for your guidance in the event that the evidence leads you to find in favor of Affymetrix.

6. DELIBERATION AND VERDICT

6.1 INTRODUCTION

That concludes the part of my instructions explaining the rules for considering some of the testimony and evidence. Now let me finish up by explaining some things about your deliberations in the jury room, and your possible verdicts.

Once you start deliberating, do not talk to the jury officer, or to me, or to anyone else except each other about the case. If you have any questions or messages, you must write them down on a piece of paper, sign them, and then give them to the jury officer. The officer will give them to me, and I will respond as soon as I can. I may have to talk to the lawyers about what you have asked, so it may take some time to get back to you. Any questions or messages normally should be sent to me through your foreperson, who by custom of this Court is Juror No. 1.

One more thing about messages. Do not ever write down or tell anyone how you stand on your votes. For example, do not write down or tell anyone that you are split 4-4, or 6-2, or whatever your vote happens to be. That should stay secret until you are finished.

6.2 UNANIMOUS VERDICT

Your verdict must represent the considered judgment of each juror. In order for you as a jury to return a verdict, it is necessary that each juror agree to the verdict. Your verdict must be unanimous.

It is your duty, as jurors, to consult with one another and to deliberate with a view towards reaching an agreement, if you can do so without violence to your individual judgment. Each of you must decide the case for yourself, but do so only after an impartial consideration of the evidence with your fellow jurors. In the course of your deliberations, do not hesitate to reexamine your own views and change your opinion, if you become convinced it is erroneous. But do not surrender your honest conviction as to the weight or effect of evidence solely because of the opinion of your fellow jurors, or for the purpose of returning a verdict. Remember at all times that you are not partisans. You are judges — judges of the facts. Your sole interest is to seek the truth from the evidence in the case.

A form of verdict has been prepared for you. You will take this form to the jury room and when you have reached unanimous agreement as to your verdict, you will have your foreperson fill in, date and sign the form. You will then return to the courtroom and your foreperson will give your verdict.

It is proper to add the caution that nothing said in these instructions and nothing in the form of verdict is meant to suggest or convey in any way or manner any intimation as to what verdict I think you should find. What the verdict shall be is the sole and exclusive duty and responsibility of the jury.

6.3 DUTY TO DELIBERATE

Now that all the evidence is in and the arguments are completed, you are free to talk about the case in the jury room. In fact, it is your duty to talk with each other about the evidence, and to make every reasonable effort you can to reach unanimous agreement. Talk with each other, listen carefully and respectfully to each other's views, and keep an open mind as you listen to what your fellow jurors have to say. Try your best to work out your differences. Do not hesitate to change your mind if you are convinced that other jurors are right and that your original position was wrong.

But do not ever change your mind just because other jurors see things differently, or just to get the case over with. In the end, your vote must be exactly that — your own vote. It is important for you to reach unanimous agreement, but only if you can do so honestly and in good conscience.

No one will be allowed to hear your discussions in the jury room, and no record will be made of what you say. So you should all feel free to speak your minds.

Listen carefully to what the other jurors have to say, and then decide for yourself.

6.4 COURT HAS NO OPINION

Let me finish up by repeating something that I said to you earlier. Nothing that I have said or done during this trial was meant to influence your decision in any way. You must decide the case yourselves based on the evidence presented.